A

Project Report on

"Grievance Redressal System"

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Project Progress Report

1. Course : Bachelor of Technology
2. Semester : VII
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4. Project Title : Grievance Redressal System
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SYNOPSIS

Grievance Redressal System

The Grievance Redressal Cell (GRC) aims to look into the complaints lodged by any student and redress it as per requirement. The students can state their grievance regarding any academic and non- academic matter within the campus through the online and grievance/ suggestion box. The institution aims at solving the grievances of the students within stipulated academic and non- academic matter within the campus through the online and grievance/ suggestion box. The institution aims at solving the grievances of the students within stipulated time.

Scope of GRC

- Academic Matters: Related to timely issue of duplicate Mark-sheets, Transfer Certificates, Conduct Certificates or other examination related matters.
- Financial Matters: Related to dues and payments for various items from library, hostels etc.
- Other Matters: Related to certain misgivings about conditions of sanitation, preparation of food, availability of transport, victimization by teachers etc.

Objectives of GRC

The Grievance Redressal Cell has been developed to settle the grievances of the students and other stakeholders within a reasonable time period for further strengthening the bond of the students with the institution by providing them with all kind of facilities to a satisfaction level for maintaining a convenient ambience of academic teaching and learning.

Objective in-detail

- Upholding the dignity of the College by ensuring strife free atmosphere in the College through promoting cordial Student-Student relationship and Student-teacher relationship etc.
- Encouraging the Students to express their grievances / problems freely and frankly, without any fear of being victimized.
- Suggestion / complaint Box is installed in front of the Administrative Block in which the Students, who want to remain anonymous, put in writing their grievances and their suggestions for improving the Academics / Administration in the College.
- Advising Students of the College to respect the right and dignity of one another and show utmost restraint and patience whenever any occasion of rift arises.
- Advising all the Students to refrain from inciting Students against other Students, teachers and College administration.
- Advising all staffs to be affectionate to the Students and not behave in a vindictive manner towards any of them for any reason.
- Ragging in any form is strictly prohibited in and outside the institution. Any violation of ragging and disciplinary rules should be urgently brought to the notice of the Principal.

Functions

- The cases will be attended promptly on receipt of written grievances from the students.
- The cell formally will review all cases and will act accordingly as per the Management policy.
- The cell will give report to the authority about the cases attended to and the number of pending cases, if any, which require direction and guidance from the higher authorities.

Procedure for Lodging Complaint

- The students may feel free to put up a grievance in writing/or in the format available in the admin dept. and drop it in boxes.
- The Grievance Cell will act upon those cases which have been forwarded along with the necessary documents.
- The Grievance Cell will assure that the grievance has been properly solved in a stipulated time limit provided by the cell.

System Requirements

Hardware Requirement

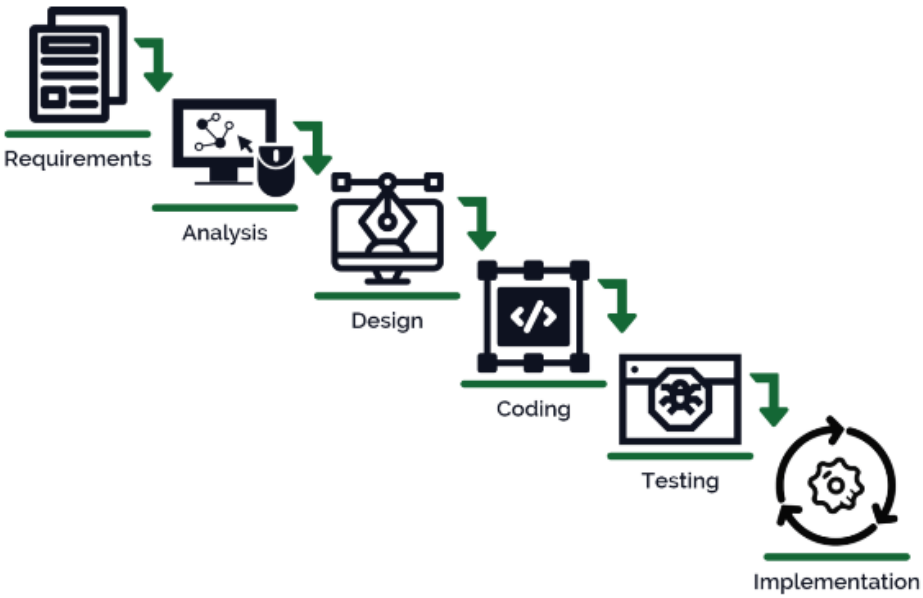
- I3 processor system or higher
- 4 GB RAM or higher
- 100 GB ROM or higher
- Minimum 350MB Hard Disk space for installation

Software Requirement

- Windows 7 or higher
- XAMP or WAMP Server
- PHP, MySQL, HTML5, CSS3, Java Script, Bootstrap
- IDE (Notepad++, Visual Studio Code, or Eclipse.)

Project Life Cycle

The waterfall model is a classical model used in system development life cycle to create a system with a linear and sequential approach. It is termed as waterfall because the model develops systematically from one phase to another in downward fashion. The waterfall approach does not define the process to go back to the previous phase to handle changes in requirement. The waterfall approach is the earliest approach that was used for software development.



The fundamental step used in **SDLC** process is based on the ISO 9001 guidelines. My aim wasto follow the ISO guidelines and develop a perfect system.

The system development was organized into 6 major parts:

1. Requirement Gathering
2. Analysis
3. Documentation/Design
4. Development/Coding
5. Testing
6. Implementation

Working of the Project

The system functions to look into the grievances lodged by any student. Students may approach the cell to voice their grievances regarding academic matters, health services, library and other services. Anyone with a genuine grievance may approach the Co-ordinator or member of the Student's Grievance cell, Grievance cell is formed in order to keep the healthy working atmosphere amongst staff and students, Admin can view the resolving status of all grievance.

Advantages

- It provides a fair and speedy means of grievance handling.
- The affected person need not consult grievance cell members directly to register complaints.
- Saves time of affected person and cell members
- Builds harmonious education atmosphere in campus

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CHAPTER 1

INTRODUCTION

In today's fast-paced educational environment, students often encounter various challenges and issues during their time in college or university. These issues can range from academic concerns to administrative problems and can have a significant impact on the student's overall educational experience. In order to address these issues effectively, a comprehensive and effective student grievance redressal system is needed.

A student grievance redressal system is a platform that provides students with a means of expressing their concerns and complaints regarding their educational experience. The primary objective of this system is to ensure that all student complaints are heard, addressed, and resolved in a timely and effective manner. The system is designed to provide students with a user-friendly interface that makes it easy to register their complaints and track their progress.

Cloud based Grievance Redressal System is developed using modern & open-source technologies like PHP with MySQL which is fully secure & easy to host on cloud. The system is designed to be user-friendly, making it easy for students to navigate and access all the necessary information.

One of the key features of the student grievance redressal system is the ability to track and monitor the progress of each complaint. This helps to ensure that all complaints are addressed in a timely and efficient manner, and that students are kept informed of the progress of their complaints. The system is also equipped with reporting and analysis tools to help university administrators understand the nature and frequency of complaints and make informed decisions to improve the educational experience for students.

The student grievance redressal system is an important tool for promoting educational accountability. The system provides a mechanism for students to hold the university administration accountable for addressing their complaints and concerns. This helps to ensure that the university is meeting its obligations to provide a quality education experience for all students.

The development of a student grievance redressal system is a crucial step toward creating a more student-centric and accountable education system. By providing students with a platform to voice their concerns, the system helps to ensure that all complaints are heard, addressed, and resolved in

a timely and effective manner. Furthermore, the system is designed to promote a positive campus culture, promote student engagement, and promote educational accountability.

The student grievance redressal system is an innovative and important tool for improving the educational experience for students. The system provides students with a means of expressing their concerns and complaints and ensures that all complaints are addressed in a timely and effective manner. The system is equipped with features such as notifications, reporting, and analysis to improve the overall efficiency and effectiveness of the grievance redressal process. The development of a student grievance redressal system is a step towards creating a more student-centric and accountable education system.

A redressal mechanism would cover complaints of not only a refusal to the return of documents or certificates, any irregularities in the admission process, but also complaints regarding harassment and victimization including harassment.

- Grievance Redressal System works functions for several purposes including ensuring a democratic campus environment.
- acquainting all the faculty and students about their rights thus ensuring qualitative as well as the quantitative development of the organization.
- Providing high quality research leading to creation and dissemination of knowledge.
- Acquainting all the faculty and students about their rights thus ensuring qualitative as well as the quantitative development of the organization. Engaging with the local community and industry for sustainable and inclusive development.
- Maintaining high quality of education.
- Expansion of current academic and research areas into diversified focus and implementation in phases.
- Encouraging discipline in university staff and students.
- Providing value based holistic education leading to the growth and development of the community better equipped to serve the mankind.

1.1 BACKGROUND/ PROBLEM STATEMENT

Student satisfaction is a major concern for any educational institute. However, many a time the students fail to express their concerns & issues or fail to reach out for proper support from the organization. Neither is there any system to address the conflicts or issues faced by the students. This eventually leads to students' dissatisfaction. Hence, to maintain the dignity of the college or institute by ensuring a conflict-free atmosphere by promoting good student-teacher relationships we have developed a Student Grievance System that will address the students' issues & grievances. The students can lodge their complaints through this system which will be redressed by the institute. This grievance cell will also look into matters of harassment thus creating a protective environment for students.

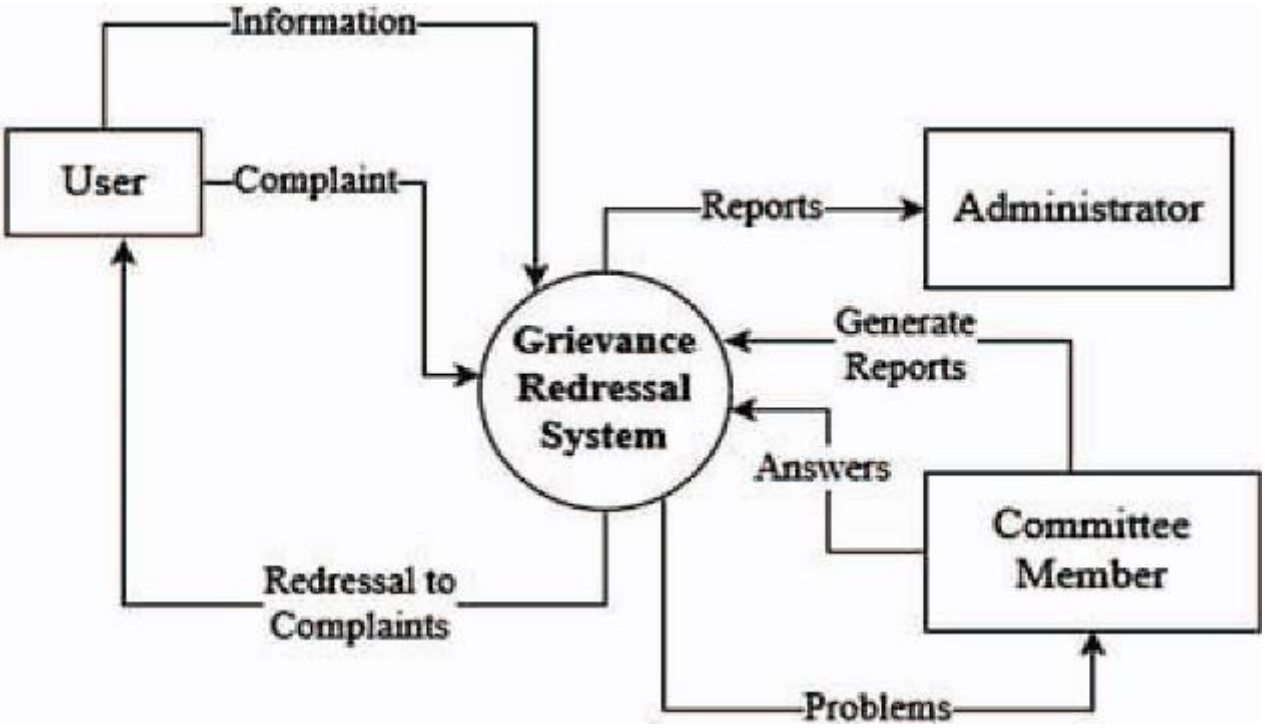

Fig 1.1 A Prototype for Grievance Redressal System.

1.2 OBJECTIVES

The Grievance Redressal Cell has been developed to settle the grievances of the students and other stakeholders within a reasonable time period for further strengthening the bond of the students with the institution by providing them with all kind of facilities to a satisfaction level for maintaining a convenient ambience of academic teaching and learning.

Objectives in-detail

- Upholding the dignity of the College by ensuring strife free atmosphere in the College through promoting cordial Student-Student relationship and Student-teacher relationship etc.
- Encouraging the Students to express their grievances / problems freely and frankly, without any fear of being victimized.
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- Advising Students of the College to respect the right and dignity of one another and show utmost restraint and patience whenever any occasion of rift arises.
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1.3 SCOPE

Scope of GRC

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- Financial Matters: Related to dues and payments for various items from library, hostels etc.
- Other Matters: Related to certain misgivings about conditions of sanitation, preparation of food, availability of transport, victimization by teachers etc.

1.4 KEY FEATURES

The software is mainly based around the following attributes:

- **Modern Technologies** - Cloud based **Grievance Redressal System** is developed using modern & open-source technologies like PHP with MySQL which is fully secure & easy to host on cloud.

- **Support & Backup** - When colleges seek GRS solutions for their institution what they are actually looking out for is software which not only manages every teeny-tiny activity of the college but also ensures effective support, retrieval and efficacy of data.

- **Customization** - Grievance Redressal System has many functions, predetermined actions and tabs, thus will reduce the administrative work of colleges. Moreover, colleges have their ownrules and regulations which are peculiar to that very institution; for such colleges we offer customization.

- **Data Security** - Moreover, it makes sure that data and confidential information of the college stays secure, under the vigilance of the admin and protected from external threats.

- **Cost Efficient** - When GRS is cloud based, colleges do not have to invest heavily on hardware installations. The greatest functional fact is that it can have many users across different college departments.

1.5 BENEFITS

- The web application is targeted to enhance the user experience by providing the user with additional features for uploading the pictures the proofs in the form of audio or video files, which might enhance the case solving ability especially in such cases with a high rate of severity. Online shopping system also manages the various type of product to customer.
- It tracks all the information of various types of complains.
- Manages the information of complainant.
- Shows the information and description of the various complains and their solutions.
- To increase efficiency of managing the university rules and regulations.
- It deals with monitoring the information and feedbacks.
- Adding, Editing, and updating of records is improved which results in proper data management of online complain system data.

1.6 PROBLEM DEFINITION

In this section we shall discuss the limitation and drawback of the existing system that forcedus to take up this project. Really that work was very typical to manage the daily errors free records and adding or removing any node from server. This problem produces a need to change the existing system. Some of these shortcomings are being discussed below: -

- **Low Functionality**

With the existing system, the biggest problem was the low functionality. The problem faced hampered the work. For small task like adding any new node to server or deleting a node or keeping daily record we have to appoint minimum two or three employee.

- **Erroneous Input and Output**

In the existing system, humans performed all the tasks. As in the human tendency, error is also a possibility. Therefore, the inputs entered by the person who is working in the Company, in the registers may not be absolutely fool proof and may be erroneous. As a result of wrong input, the output reports etc. Will also be wrong which would in turn affect the performance.

- **Portability Problem**

System that existed previously was manual. As a result, the system was less portable. One has to carry the loads of many registers to take the data from one place to another. A big problem was that the system was less flexible and if we wanted to calculate yearly or monthly maintenance report or efficiency report, then it was a big headache.

- **Security**

Security concerns were also one of the motives of the Company for the need of software. In the registers, the data is not secure as anybody can tamper with the data written in the registers. While in this software, just a password makes it absolutely secure from the reach of unauthorized persons.

- **Data Redundancy**

In the case of manual system, the registers are maintained in which, a lot of data is written.

- **Processing Speed**

In manual system maintaining a register and performing the necessary calculation has proved to be a troublesome job, which takes a lot of time and may affect the performance of the Company. But with this software we can have all the tasks performed in a fraction of second by a single click thus making the troublesome job much easier.

- **Manual Errors**

When a number of tough tasks are prepared by the humans like preparation of reports, performing long calculation then some human errors are obvious due to a number of factors like mental strain, tiredness etc. But as we all know that computer never get tired irrespective of the amount of work it has to do. So, this software can nullify the probability of manual error that improve the performance.

- **Complexity in Work**

In manual system whenever a record is to be updated or to be deleted a lot of cutting and overwriting needs to be done on the registers that are concerned that are deleted or updated record, which makes the work very complex.

1.7 EXISTING SYSTEM

The Traditional forum system contains public meeting or presentation involving a discussion usually among experts and sometimes audience participation. Here, person visited College/ University officials for his complains. All the arrived complaints are undergo the Administrator. Administrator distribute complaints among different departments consistent with complain type. Employees solve the issues and complain status in books manually. One of officer gives current status information of complaints from the books.

Disadvantages of Existing system

The students has go to visit forum and had to form complaint against faculty /Staff / Academics/ Sanitization / Fees / Hostel etc. The complaint are going to be discussed within the presence of students, staff and a team of expert committee along side judge. The final decision making may be a time consuming therefore the student has got to revisit the forumto urge the result.

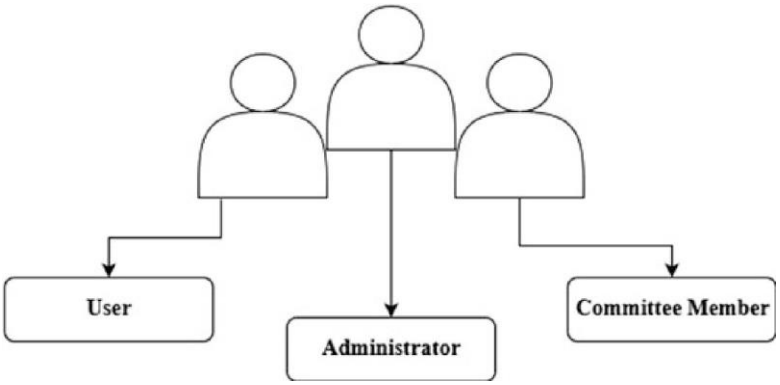
The GRS Application would use a database to carry students complaints and reports generated by the technical team online complaint management system contains all complaint details a complaint inventory contains all complaints with its status reports the system provides the power if the students gives the incorrect information then he edit the complaint details to supply the right information to the system. The modem **Grievance Redressal System** is comprehensive suite of identify the fault supported the students provided information and generating reports for the Complaint.

1.8 PROPOSED SYSTEM

It will be Fast and Dynamic Data. All the knowledge of admin / students are going to be managed properly. The assignment of complaints to different students/ faculty / staff are going to be done properly in order that there will be no repetition. It will create a portal where any record of all stakeholder or complain will never stray. Automatic reply and answer viewing of complaint within one-two days. If any employee don't perform their task then strict actions will be taken.

Advantages of proposed system

- In this technological international, this device is beneficial for the humans to file a criticism with the help of cell software so that you can store time of people.
- It will reduce the effort and time of registering the criticism manually by means of lodging complaint on-line.
- Also the fame of the complaint lodged can be tracked easily i.e. whether or not the criticism is rejected, time-honored, processing or solved.
- Location of the user may be tracked without problems with the help of a GPS device.
- It is person-friendly and cost-powerful
- A remainder machine could be there as a way to be helpful for the pending court cases. It will preserve on reminding the officer about the pending troubles or unsolved problems. So, that each and each trouble need to be solved effectively.



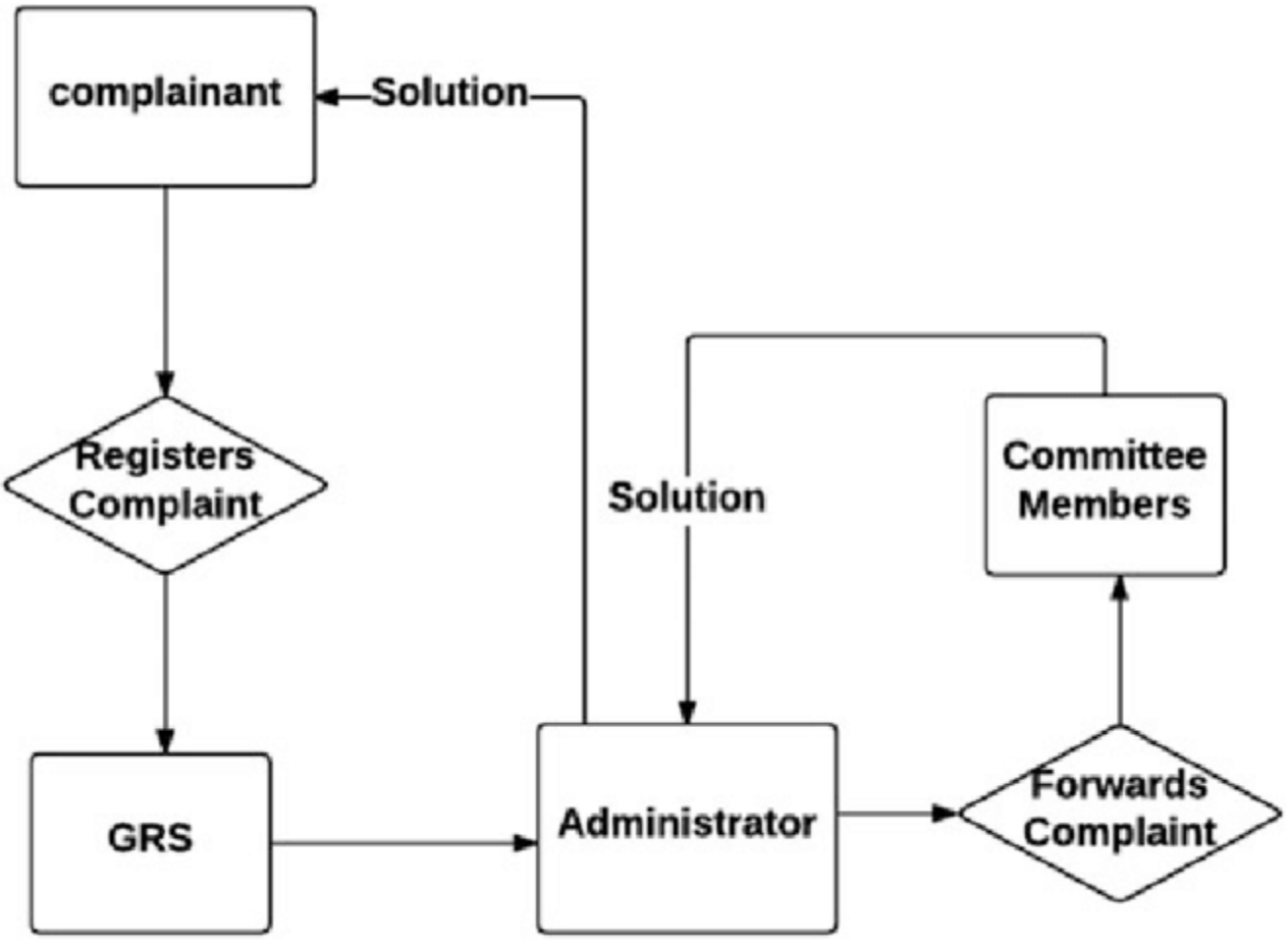


Fig 1.2 Prototype of the proposed system

Modules and Their Description of Grievance Redressal System

- Login Module
- Registration Module
- Student Complain Module
- Admin Login and Authentication
- Complain Progress Management
- Dashboard Management

- Final Report Management

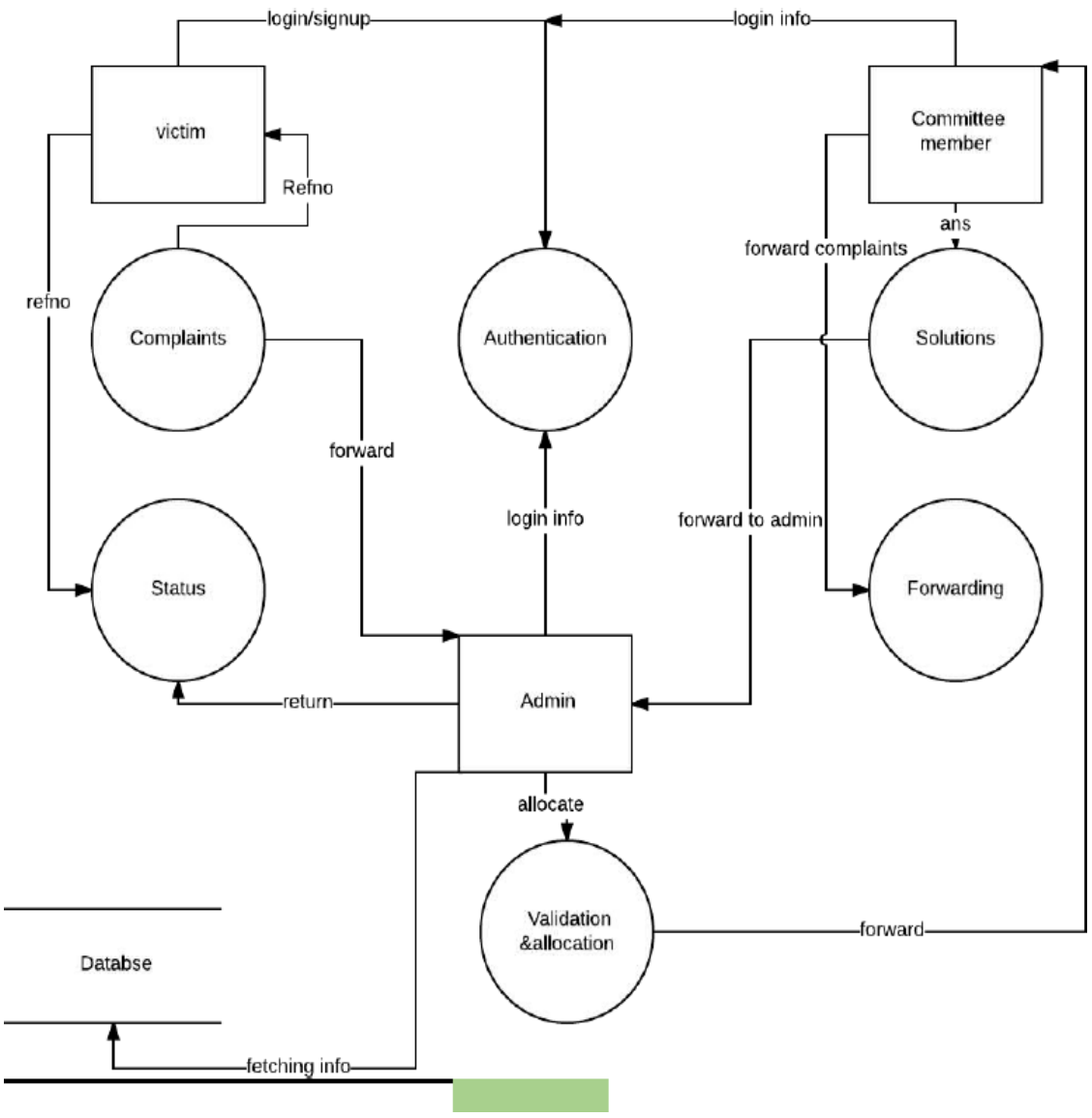


Fig 1.3 Level 1 (Data Flow Diagram)

(Grievance Redressal System)

CHAPTER 2

BACKGROUND AND RELATED WORK

2.1 LITERATURE SURVEY

A Prototype for Grievance Redressal System [1] The System designed by the authors tells the complete differences between the traditional grievance system and the need for a computerized grievance system. If the association is an academic institution, then this issue becomes more sensitive and important. Students are the most vulnerable entities at educational institutions often failing to express themselves and sometimes fails to seek proper support for the issues they face arising at numerous levels.

All India Grievance Redressal Application [2] The paper published by the authors states the problems faced during offline grievance and the preventative measures taken by creating the mobile application. The grievance enrollment systems have evolved in numerous ways with the advancement in technologies to simplify the task. This paper presents the architecture of a grievance redressal operation where civilians can address any kind of complaint they're facing. The main focus of the project is pothole-related complaints. This operation will give easy access to people to put their complaints towards the government.

State-Level Students Grievance Support System [3] The paper includes the importance of an easy and fast grievance system that can be implemented for state-level institutes. Students are an essential factor in an organization. The scholar may feel dissatisfied with the service when he or she receives a delay in services. To beat this, they offer an optimized solution for the student grievances support system for improving the relationship between students and the university by representing the model of an e- complaint web-based system. The prevailing system has machined processing through the panel, principal, head of the department, and council premises. This design overcomes the restrictions of the systems regarding complication of submitting a complaint and organizing it. In this way it constitutes a state- position support system.

Managing and improving service quality in higher education [4] The paper states the importance of Higher Education in our society, and how to improve the services for scholars. Many Higher Education institutions still ignore them at their own risk. It is especially true for service quality and this paper will focus on Higher Education service quality management and improvement. The paper aims to discuss these issues. The paper implements Schneider and Bowen's model of the three tiers of service organizations and service quality management and improvement methods, in Higher Education institutions.

The Application of Service-Oriented Architecture in E-complaint System [5] The paper tries to improve the relationship between citizens and government by presenting a new model based on service-oriented architecture. The researcher tried to improve the relationship between citizens and government by presenting a new model based on Service Oriented Architecture (SOA). This study can also be helpful in other fields of government in terms of citizen acceptance and citizen adhesion. The results of this study can be a good reference to find out users' needs from complaints and the significance of complaints in the body of government.

Design and Implementation of Online students complaint [6] The paper provides a powerful and flexible system that can use anytime and anywhere by the students. It helps to manage and accommodate complaints fast and easily thus it can know the strength and weaknesses of its body as an educational services organization then it can provide a better solution. The system used prototype version is an improved machine version of the structure, plan, and layout of the machine. It used unified modeling language (UML) to make the abstraction of the program, PHP as a language program, and MySQL as the database. The end result of the study is the grievance might be regarded as less difficult and quicker in addition to its assessment and responses.

Grievances Redressal Mechanism of University Students in India- Policy and Law [7] The study is based on the analysis of complaints from students in college and how to deal with them. The system includes exclusions from admission, withdrawal from studies, abandonment, attendance, participation in examinations, non-issuance of admission tickets, unfair screening, delay in results, issuance of graduation/grade reports, harassment, discrimination based on caste, race, religion, gender, etc.

An Online Grievance Redressal system [8] The website is mainly aimed at reducing manual processing and receiving all complaints about the college, providing updates on complaints and managing data handling complaints, and facilitating the work of users and complaint resolvers. In the system, the possibility to manage users and their data complaints and their profiles can also be easily managed. The data can be easily viewed and modified as needed. The complaint

management system also provides the ability to provide monthly reports used to maintain information number of complaints resolved in a given month. It also provides user verification.

A web portal for student grievance support system [9] The project provides an optimized solution for Student complaint Support System. The model uses a mechanism of conversion from manual to automation. By providing the system to students, complaints are recorded and checked by submitting samples through the system. The proposed model is based on students and institutes.

Online Grievance Management System [10] The project is to provide an optimized solution for student complaints. The proposed model of a student complaint management system can minimize student complaints. It tries to improve the relationship between students and universities by presenting a model of a web-based system for electronic student complaints. The existing system involves manual processing by committees, directors, and relevant departments. The proposed system was able to automatically complete the process using the application.

Smart complaint management system [11] The system includes a web portal that provides a login interface for students and also accepts complaints and consultations with city hall staff. It simplifies processes to easily resolve complaints, forward the complaint to a sub officer. The employee is also given the option to update the complaints progress about processing. The employee and grievance officer have the right to reject the complaint. It also has a module that keeps track of how many complaints are resolved, handled and refused and create graph to illustrate it.

Online complaint management system [12] The online complaint management system provides a way to solve problems faced by the public by saving time and eliminating corruption. The purpose of a complaint management system is to facilitate the coordination, monitoring, tracking, and resolution of complaints, to identify and address problem areas, and to provide companies with effective tools to monitor and improve their complaints handling performance and business.

2.2 COMPARITIVE STUDY

Table no.1. Comparative study of literature survey

Sr no.	Paper Name	Author	Technology	Advantages	Disadvantages
[1]	A Prototype for Grievance Redressal Systems	Shaligram Prajapat, Vaibhav Sabharwal, Varun Wadhwani	HTML and CSS, PHP, and SQL.	The projects include complaints regarding the college environment, faculty feedback, and fees collection.	Poor network quality can persist intermittently. As a result, the system for creating and resolving complaints in the form of responses back to corresponding administrators and students can be delayed.
[2]	All India Grievance Redressal App	Viral Patel, Daanyaal Kapadia, Rizvi Education Society, Deval Ghevariya, Shiburaj Pappu	JavaScript, MongoDB, NoSQL.	This Application will give easy access for people to put their complaints to the government	The system has developed an algorithm but has not been implemented in real software.
[3]	State-Level Students Grievance Support System	Satheeswaran Venkatesan, Arjun R, Nidhin A, Pranav C.	HTML and CSS, PHP, and SQL.	The student has the ability to post a complaint easily and specifically	Third party can modify the system.

				using categories through the application	
[4]	Managing and improving service quality in higher education	Moshe Sharabi	Java, HTML, CSS	It provides a service that satisfies the requirements and expectations of the students and works together to enhance procedures and systems.	It is not user-friendly.
[5]	The Application of Service-Oriented Architecture in E-complaint System	Amir Shareghi Najar, Hassan Al-Sukhni, Navid Aghakhani, Hassan Awad Al Sukhni	SOA(Service Oriented Architecture)	The e-complaint system brings more flexibility for complaint departments to change their complaint services.	The system is unable to distinguish between real complaints and fake complaints is one of the most important obstacle.

[6]	Design and Implementation of Online Student's complaint	M.A.Munuhutu,,Luiu Uktolseja	Modeling language(UML),PHP,MySQL	It helps to manage and accommodate the complaint fast and easily thus it can know the strength and weaknesses of an educational service organization then it can deliver a better solution to enhance its service.	It has limitations in data security.
[7]	Grievances Redressal Mechanism of University's Students in India- Policy and Law	Manish Rohatgi, Meenu Gupta	Java, HTML, CSS	The grievance of students include issues related to the course, ragging, harassment, and discrimination.	It is less secure.

[8]	An Online Grievance Redressal system	Mukesh Buldak, Shrikant Pandhekar, Afzal Gigani, Amreshsinh Kachwah, Kundan Patil, Poonam Polshetwar, Pradeep Jadhav.	HTML and CSS, PHP, and SQL.	The website is mainly designed to reduce the manual efforts and receive all complaints about the college. It also provides the current status of complaints. It makes complaint resolving task easier.	The System cannot provide the service to the Users to view their previous Complaints.
[9]	A web portal for student grievance support system	Jincy Denny,Ramya Chanda, Sweta Rani Lenka, A. Srija Reddy , Sahithya Vallabaneni.	Javascript, HTML, CSS, MySQL.	The project is designed in order to reduce the burden of maintaining the bulk of records of all student's grievance details of who study in an educational institution.	Grievance paper might be replaced.

[10]	Online Grievance Management System at institute level.	Mohan, P. Poorna Chandra, E. Vijay, M. Logesh	HTML, CSS, PHP, MySQL, XAMPP	It will reduce the time and effort of registering the complaint manually by lodging a complaint online.	The students do not have a channel for tracking complaints
[11]	Smart complaint management system	Devika Radhakrishnan, Nisarg Gandhewar, Ruchita Narnaware, Prayas Parade, Arpan Tiwari, and Pooja vijaywargi	JavaScript, MongoDB, NoSQL.	The system is useful for people to file a complaint with the help of a mobile application which will save the time.	The system doesn't have much accuracy and is not user friendly.
[12]	Online complaint management system	Osman Nasr, Enayat Alkhider.	HTML, CSS, PHP, MySQL, XAMPP	It Identify and target problem areas, monitors complaints handle performance	The users can post their problems but cannot get the details of the problems & services.

CHAPTER 3

HARDWARE AND SOFTWARE REQUIREMENT

3.1 Hardware Requirement

- I3 processor system or higher
- 4 GB RAM or higher
- 100 GB ROM or higher
- Minimum 350MB Hard Disk space for installation

3.2 Software Requirement

- Windows 7 or higher
- XAMP or WAMP Server
- PHP, MySQL, HTML5, CSS3, Java Script, Bootstrap
- IDE (Notepad++, Visual Studio Code, or Eclipse.)

CHAPTER 4

SDLC METHODOLOGIES

4.1 SDLC METHODOLOGIES

SYSTEM ANALYSIS

Overview of GRS

Phases

System Development Life Cycle (SDLC) mainly consists of the following 7 phases which can be detailed: -

Preliminary Investigation

This is the first phase of the system development life cycle. In this phase we tend to find out the needs of the client –what exactly does the client want? Before the development of any system the important point is to know the needs, objectives and scope of the system.

Feasibility Study

Feasibility study is the second step of the system development life cycle. Things are always easy at the beginning in any software process. In fact nothing is in feasible with unlimited time and resources. But it is not the fact. So, practically we have to do in limited resources in a restricted time margin. So for the system to be feasible, following points we have to consider.

The feasibility study is conducted to check whether the candidate system is feasible. The system which is selected to be the best against the criteria is there after designed and developed. The feasibility study takes in to consideration, the risks involved in the project development beforehand. Therefore, in this phase we have to do feasibility study which is the test of the website according to its work ability, impact on the organization, ability to meet user need and effective use of resources. We do the feasibility study for website to analyze the risks, costs and benefits relating to economics, technology and user organization. There are several types of feasibility depending on the aspect they cover. Import of these includes:

Technical Feasibility

This is an important outcome of preliminary investigation. It comprises of following questions: -

- Can the work of projected one with the current equipment, existing software and available man power resource?
- If Technology is required what are the possibilities that it can be developed?

Economic Feasibility

It deals with question related to the economy. It comprises of the following questions: -

- Are there sufficient benefits in creating the system to make the cost acceptable?
- Are the costs of not creating the system so great that the project must be undertaken?

Legal Feasibility

It deals with the question related to the legal issues. It comprises of the following questions: -

- Contract Signing
- Software License agreement
- Issues related to cyber laws.
- Legal issues relating to the man power contract.

Operational Feasibility

The operational feasibility consists of the following activity: -

- Will the system be useful if it is developed &implemented?
- Will there be resistance from employee?

Social & Behavioral Feasibility

It deals with the various issues related to the human behavior like: -

- Whether the user be able to adapt a new change or not?
- Whether the ambiance we are providing suits the user or not?

Request Approval

Request approval is the third phase of system development lifecycle. Request approval is the phase in which all the requirements which would be provide in the system are stated. The request approval is a sort of agreement between the client and the company which is building this software. Both the parties should be mutually agreed on the stated requirements.

System Analysis

System analysis is the phase following the phase of the request approval. In this phase we tend to analyze the overall system which we have to build. System analysis is the crucial part in SDLC.

System Design

System design means the designing of the system. The System can be done in either of the following two ways: -

- Logical System Design
- Physical System Design

Coding

Coding is the phase in which a developer codes using any programming languages. Coding constitutes only20 % of the whole project and which is easier to write. The coding work is also done in the teams; development of the system is usually done under the modular programming style, which can be either top-down approach or bottom-up approach.

Testing

Testing is the phase in which the system that has been developed is tested. Testing comprises of the 60%ofthe overall development of the system. Testing of the system is important because testing aims to uncover the different errors in the system. There are various different testing techniques that can be used for the testing of the system.

Implementation

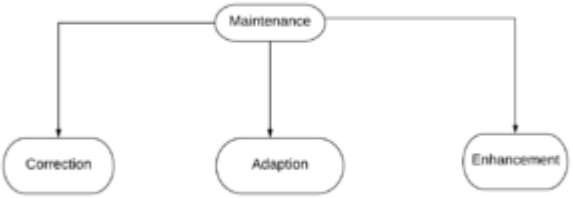
Implementation process involved the installation of software on user's side. Implementation process actually depends on type of a system &various. Opting for suitable conversion approach is a step implementation. The conversion processes are as follows: -

- Parallel Conversion
- Direct Conversion Approach
- Pilot Conversion Approach

- Phase In Conversion Approach

Maintenance

Merely developing the system is not important but also maintenance is important. The company that has built the system provides for some time free of cost maintenance to the client and after that period it is usually a paid service.



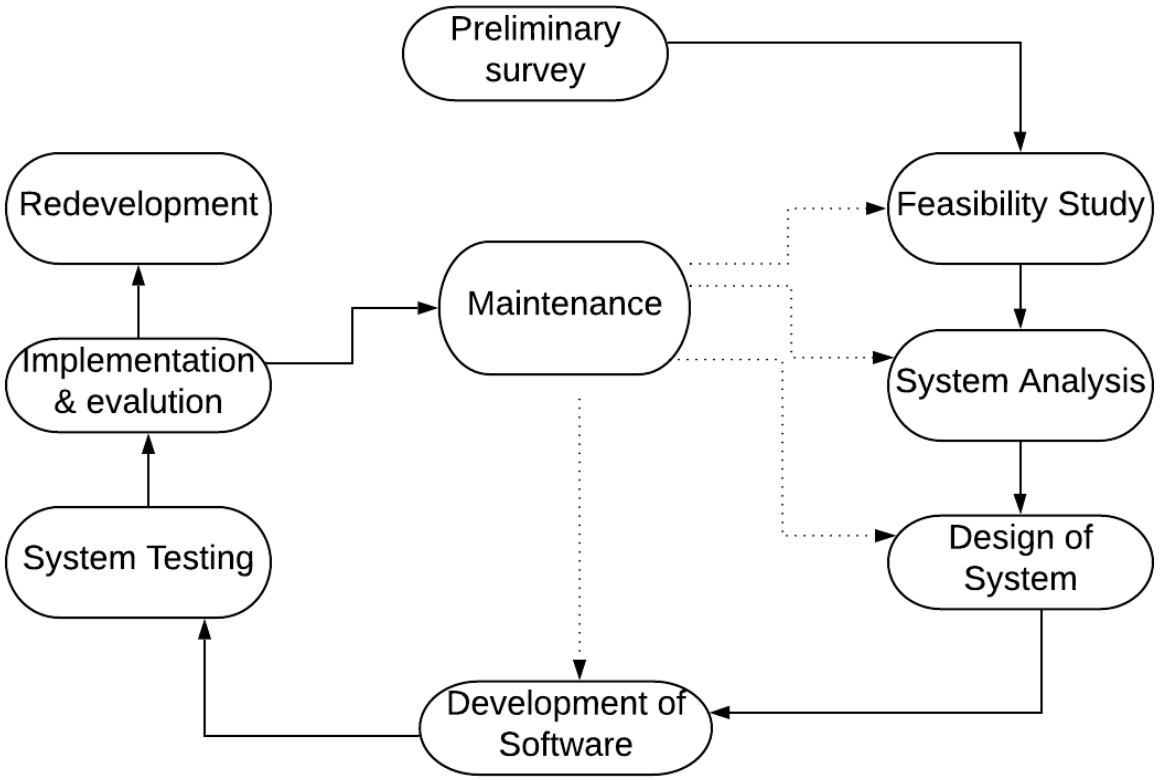


Fig. 4.1 Various stages in system development

CHAPTER 5

SOFTWARE REQUIREMENT SPECIFICATION AND ANALYSIS

5.1 SOFTWARE REQUIREMENT SPECIFICATION

A requirements specification for a software system is a complete description of the behaviour of a system to be developed and it includes a set of use cases that describe all the interactions the users will have with the software. In addition to use cases, the SRS also contains non-functional requirements.

Non-functional requirements are requirements which impose constraints on the design or implementation (such as performance engineering requirements, quality standards, or design constraints). Requirements are a sub-field of software engineering that deals with the elicitation, analysis, specification, and validation of requirements for software.

The software requirement specification document enlists all necessary requirements for project development. To derive the requirements, we need to have clear and thorough understanding of the products to be developed. This is prepared after detailed communications with project team and the customer.

Hardware Requirements

1. Minimum 350MB Hard Disk space for installation
2. 4GB HD space required for a typical live system with 1000-2000 events
3. Recommended minimum CPU - Pentium 4, 3.2GHz
4. Recommended 1GB RAM for a Central Server with 3 Nodes

Software Requirements

User Interface Designing	HTML5, CSS3, Java Script, Bootstrap
Programming Language	PHP (WAMP Server)
Database	MySQL
IDE	Notepad++, Visual Studio Code

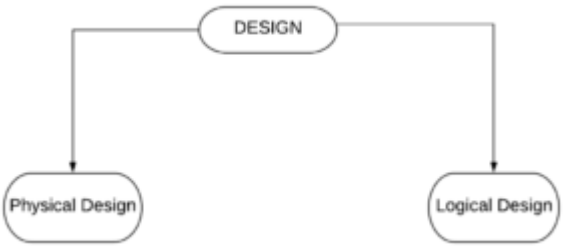
System Analysis

System analysis is the phase following the phase of the request approval. In this phase we tend to analyze the overall system which we have to build. System analysis is the crucial part in SDLC.

System Design

System design means the designing of the system. The System can be done in either of the following two ways: -

- Logical System Design
- Physical System Design



SYSTEM DESIGN APPROACH

Top – Down designing

The top - down designing approach started with major components of the system. It is a stepwise refinement which starts from an abstract design, in each steps the design is refined two or more concrete levels until we reach a level where no – more refinement is possible or not needed.

Bottom – Up designing

In bottom – up designing the most basic and primitive components are designed first, and we proceed to higher level components. We work with layers of abstractions and abstraction are implemented until the stage is reached where the operations supported by the layer is complete.Approach we are following

In this project we are following Mixed Approach i.e. a combination of top – down and bottom – up. We are developing some of the components using top – down designing approach (e.g. the Web Pages) and some components in bottom – up designing approach (e.g. the middle tier classes).

CHAPTER 6

RISK ASSESSMENT

Risk assessment is a crucial component of any project, including a grievance redressal system. It involves identifying potential risks that could impact the project's success and developing strategies to mitigate or manage those risks. Below is a sample risk assessment for a grievance redressal system.

User Engagement and Adoption

Risk

Students may not actively engage with the grievance redressal system, leading to its underutilization.

Mitigation

Conduct awareness campaigns, gather feedback during the development phase, and incorporate features that resonate with student needs. Offer incentives for using the system.

Limited Technical Proficiency

Risk

Some students may have difficulty using the system due to limited technical skills.

Mitigation

Provide user-friendly interfaces, conduct training sessions, and offer support through tutorials or helpdesk services. Ensure the system is accessible on multiple devices.

Inadequate Resource Allocation

Risk

Insufficient resources (human, financial, or technological) may hinder the project’s progress.

Mitigation

Conduct a thorough resource analysis, secure necessary funding, and allocate skilled personnel to the project. Regularly reassess resource needs.

Mismatched Expectations

Risk

Students' expectations may not align with the capabilities of the grievance redressal system.

Mitigation

Clearly communicate the system's functionalities, involve students in the requirements gathering process, and manage expectations through regular updates and feedback sessions.

Data Privacy Concerns

Risk

Students may be concerned about the privacy and security of their grievance-related data.

Mitigation

Implement robust data encryption, comply with relevant privacy regulations, and communicate transparently about the security measures in place.

Integration Issues

Risk

Difficulty integrating the grievance redressal system with existing college systems or databases.

Mitigation

Conduct a thorough system integration analysis, involve IT experts, and ensure compatibility with existing infrastructure. Have a contingency plan for any unforeseen integration challenges.

Communication Gaps

Risk

Inadequate communication channels may lead to misunderstandings or delays.

Mitigation

Establish clear communication protocols, utilize collaboration tools, and conduct regular progress meetings with stakeholders. Foster an open communication culture.

Student Resistance to Formal Processes

Risk

Some students may resist using formal grievance processes, preferring informal channels.

Mitigation

Educate students about the benefits of the formal system, address concerns, and highlight the fairness and transparency of the process. Provide options for anonymous submissions if appropriate.

Unforeseen Policy Changes

Risk

Changes in college policies may impact the functionality or relevance of the grievance redressal system.

Mitigation

Stay informed about college policies, maintain flexibility in system design, and establish a process for adapting the system to policy changes.

Student Turnover

Risk

Graduating students or those leaving the college may result in a loss of system knowledge and continuity.

Mitigation

Document the system thoroughly, provide training to new stakeholders, and ensure that knowledge transfer occurs between departing and incoming students or staff.

Regularly revisiting and updating the risk assessment, especially during different phases of the project, will contribute to the project's success by identifying and addressing potential challenges proactively.

CHAPTER 7

DFD /ER DIAGRAM/ WIREFRAME/APPLICATION ARCHITECTURE

Data Flow Diagram

Introduction

DFD is an acronym for the word Data Flow Diagram. DFD is pictorial representation of the system. DFD is a graphical representation of the flow of data through the information system. DFD are also used for the visualization of data processing (structured design). ADFD provides no information about the timings of the process, or about whether process will operate in parallel or sequence. DFD is an important technique for modeling a system's high-level detail by showing how input data is transformed to output results through sequence of functional transformations. DFD reveal relationships among between the various components in a program or system. The strength of DFD lies in the fact that using few symbols we are able to express program design in an easier manner. A DFD can be used to represent the following: -

- ♣ External Entity sending and receiving data.
- ♣ Process that change the data.
- ♣ Flow of data within the system.
- ♣ Data Storage locations.

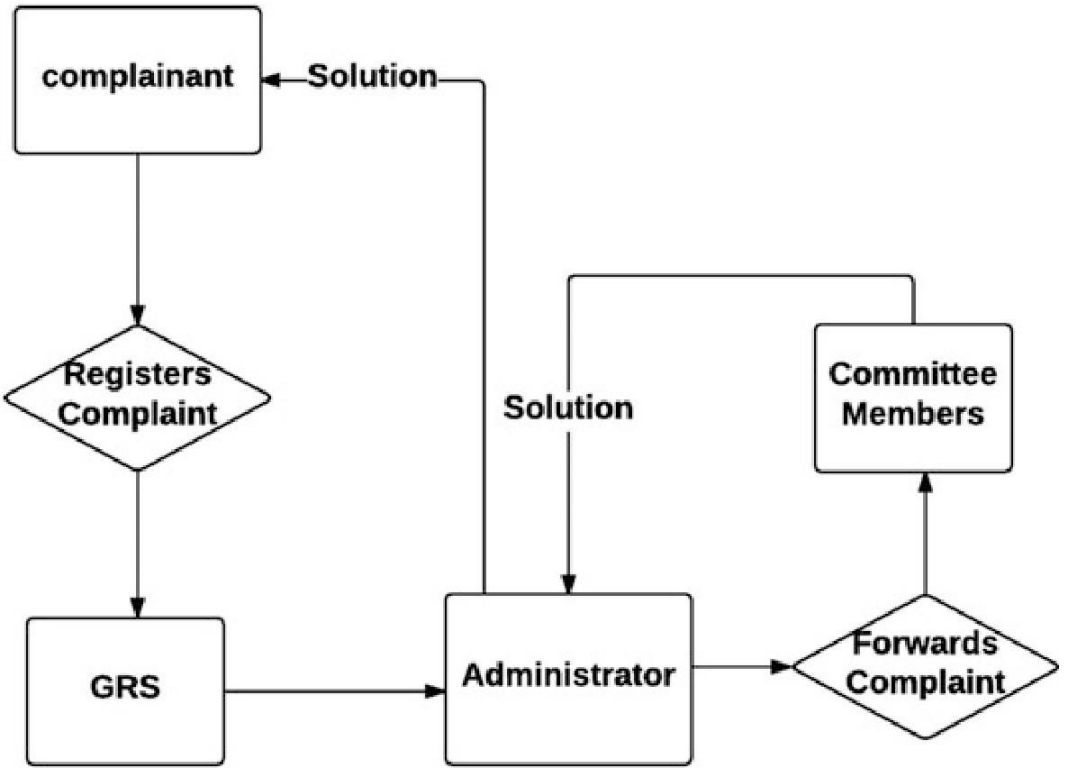
Uses of DFD

The main uses of data flow diagrams are as follows: -

DFD is a method of choice for representation of showing of information through a system because of the following reasons: -

- DFDs are easier to understand by technical and non-technical audiences.
- DFDs can provide high level system overview, complete with boundaries andconnections to other system.
- DFDs can provide a detailed representation of system components.

Modelling of Grievance Redressal System



ER-Diagram

Introduction

In software engineering, an entity-relationship model (ERM) is an abstract and conceptual representation of data. Entity-relationship modeling is a database modeling method, used to produce a type of conceptual schema or semantic data model of a system, often a relational database, and its requirements in a top-down fashion. Diagrams created by this process are called entity-relationship diagrams, ER diagrams, or ERDs. ER Diagrams depicts relationship between data objects. The attribute of each data objects noted in the entity-relationship diagram can be described using a data object description. Entity relationship diagram is very basic, conceptual model of data and it is fundamental to the physical database design. This analysis is then used to organize data as relations, normalizing relations, and obtaining a Relational database.

The entity-relationship model for data uses three features to describe data. These are:

1. Entities which specify distinct real-world items in an application.
2. Relationship, which connect entities and represent meaningful dependencies between them.
3. Attributes which specify properties of entities & relationships.

CHAPTER 8

PROJECT MODULES DESIGN/ DATABASE TABLES/ SOFTWARE FEATURES

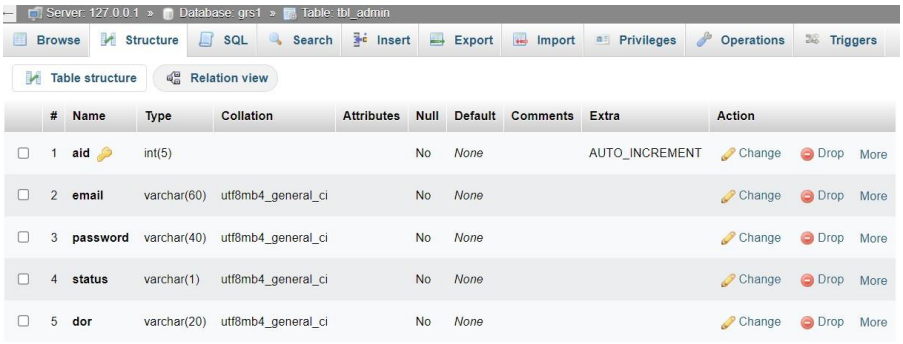
DATA MODELING

LIST OF TABLES

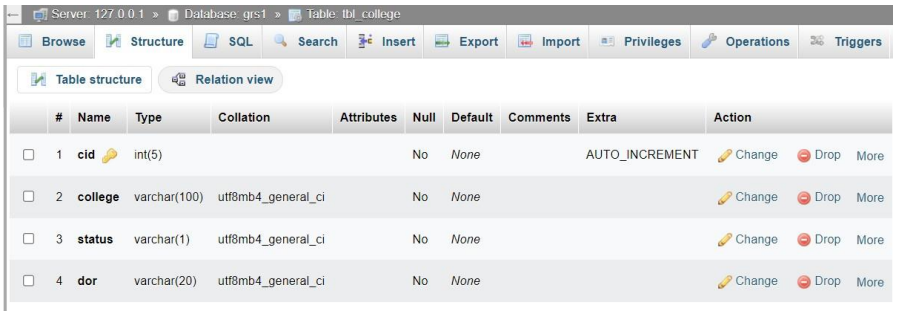
- Tbl_admin
- Tbl_college
- Tbl_session
- Tbl_complain_type
- Tbl_complain
- Tbl_question
- Tbl_answer
- Tbl_user

SCREENSHOTS OF TABLES

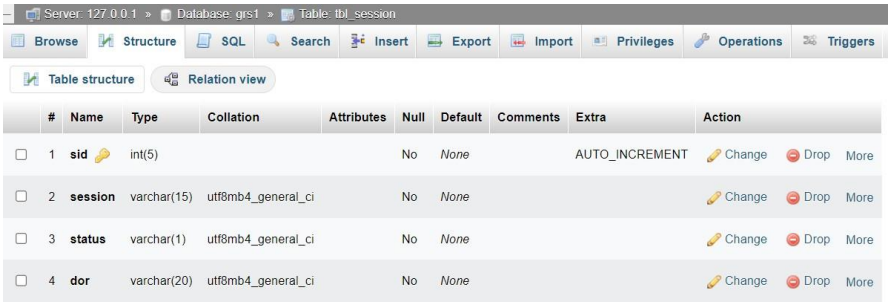
- Tbl_admin



- Tbl_college

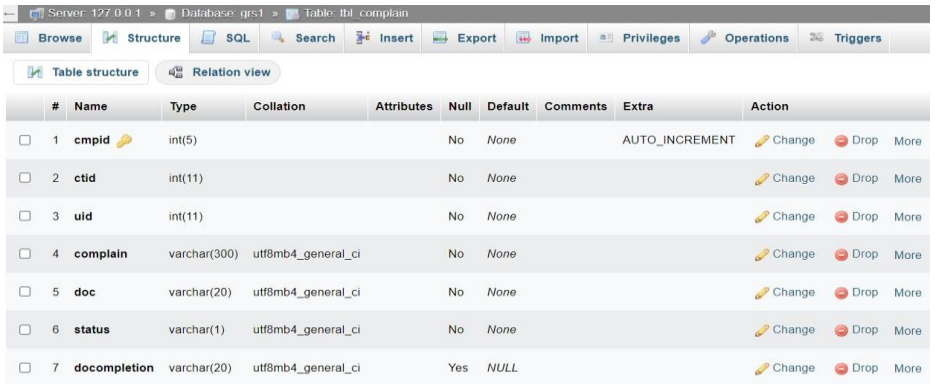


- **Tbl_session**

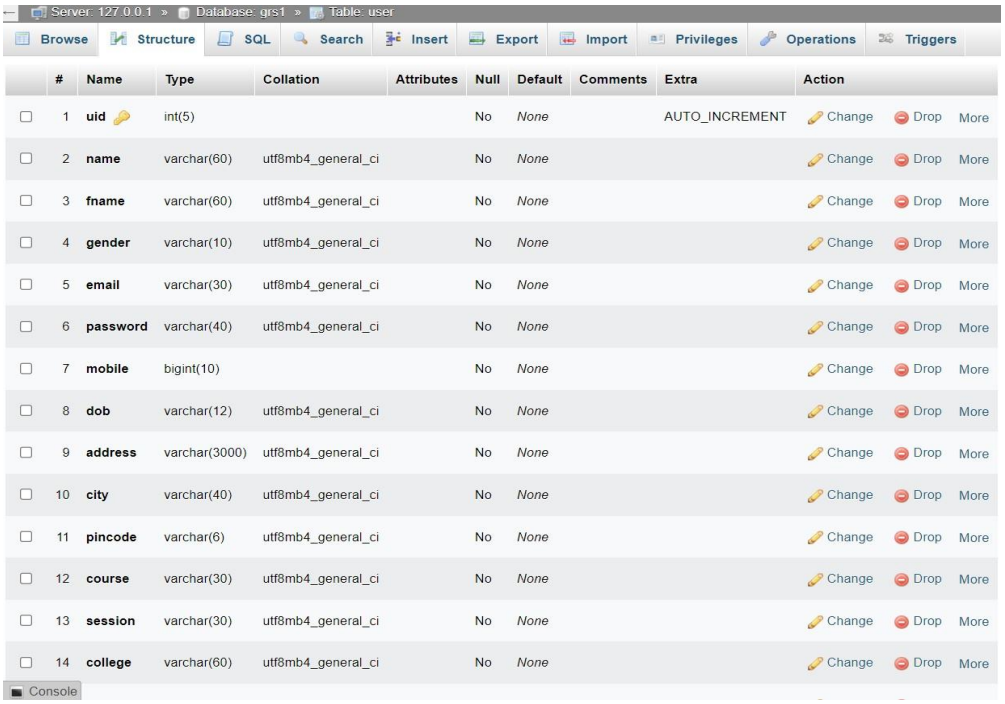


- **Tbl_complain_type**

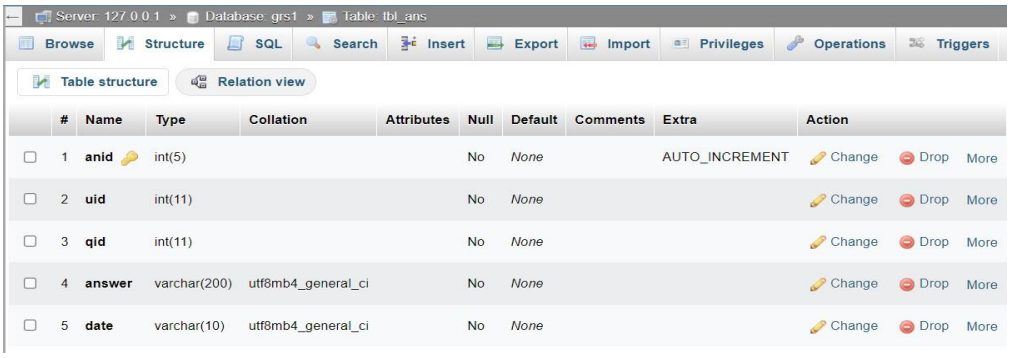
- **Tbl_complain**



- **Tbl_question**



- **Tbl_answer**



-

- **Tbl_user**

SOFTWARE FEATURES

System Description

The system comprises of 3 major Entity as follows:

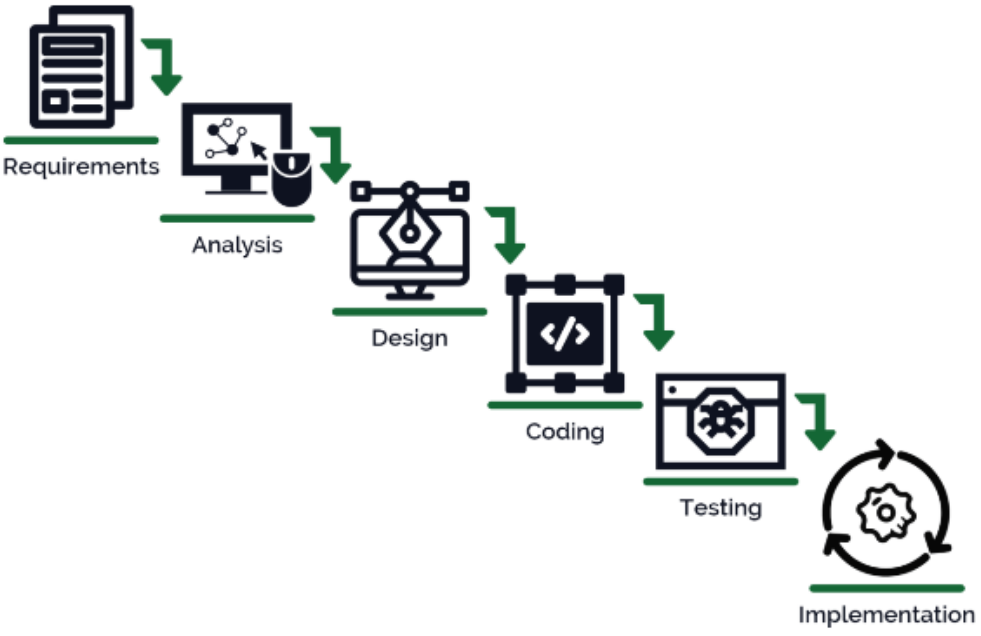
1. **Admin:**
    - **Manage College:** Admin can add college.
    - **Manage Session:** Admin can add Session.
    - **Manage User:** Admin can view & manage the registered users**.**
    - **View & Manage Complain:** Admin can view & manage all the complaints raised by the students.

2. **Register:**
    - **Registration:** Users can take admission through the registration process.

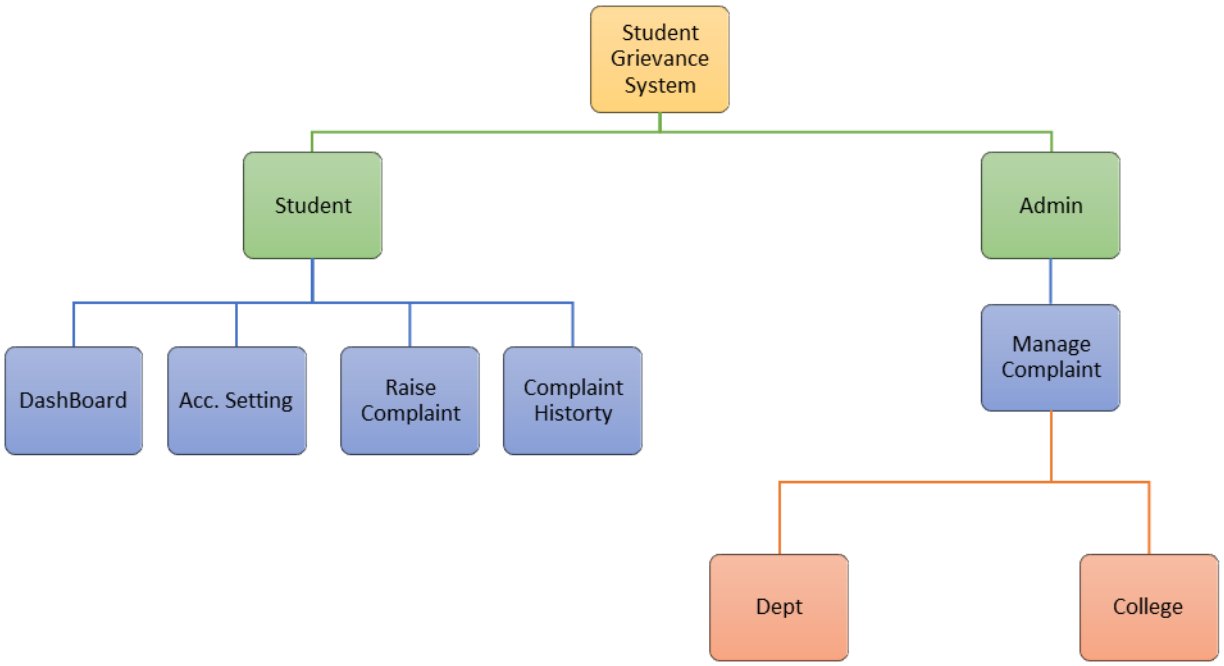
3. **Student:**
    - **Student Login:** Student can log into their existing account through their user id and password.
    - **Update Profile:** Student can update his profile.
    - **Lodging Complaint:** The students may feel free to put up a grievance in writing/or in the format available in the admin dept. and drop it in boxes.

Project Life Cycle

The waterfall model is a classical model used in system development life cycle to create a system with a linear and sequential approach. It is termed as waterfall because the model develops systematically from one phase to another in downward fashion. The waterfall approach does not define the process to go back to the previous phase to handle changes in requirement. The waterfall approach is the earliest approach that was used for software development



Modelling of Grievance Redressal System



Low Level Design

Description: Low Level Design creation is one of the most important activities in the development of any software product. The low-level design document gives the design of the actual software application. Low level design document is based on High Level Design document. It defines internal logic of every sub module. A good low level design document will make the application very easy to develop by the developer. An effective design document results in very low efforts in developing a Software product.

Each project's low level design document should provide a *complete and detailed* specification of the design for the software that will be developed in the project, including the classes, member and non-member functions, and associations between classes that are involved.

The low-level design document should contain a listing of the declarations of all the classes, non-member-functions, and class member functions that will be defined during the subsequent implementation stage, along with the associations between those classes and any other details of those classes (such as member variables) that are firmly determined by the low-level design stage. The low-level design document should also describe the classes, function signatures, associations, and any other appropriate details, which will be involved in testing and evaluating the project according to the evaluation plan defined in the project's requirements document.

TESTING

Testing is the integral part of any System Development Life Cycle insufficient and interested application tends to crash and result in loss of economic and manpower investment besides user's dissatisfaction and downfall of reputation.

"Software Testing can be looked upon as one among much process, an organization performs, and that provides the last opportunity to correct any flaws in the developed system. Software Testing includes selecting test data that have more probability of giving errors." The first step in System testing is to develop the plan that all aspect of system. Complements, Correctness, Reliability and Maintainability.

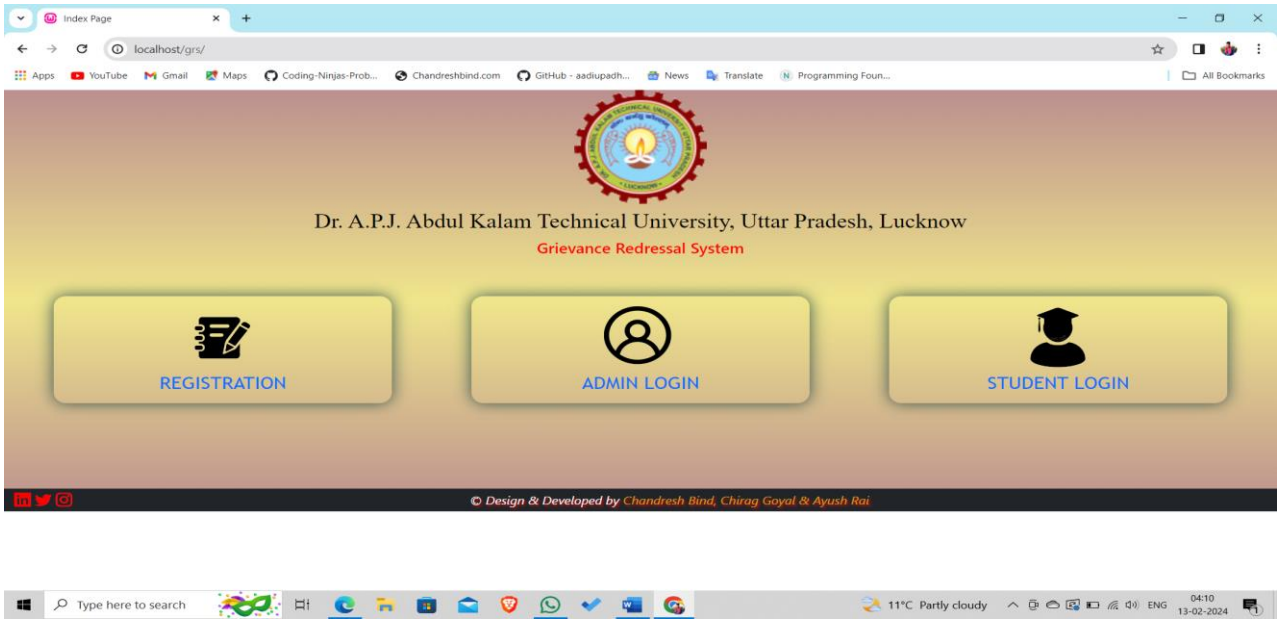
Software is to be tested for the best quality assurance, an assurance that system meets the specification and requirement for its intended use and performance.

System Testing is the most useful practical process of executing the program with theimplicit intention of finding errors that makes the program fail.

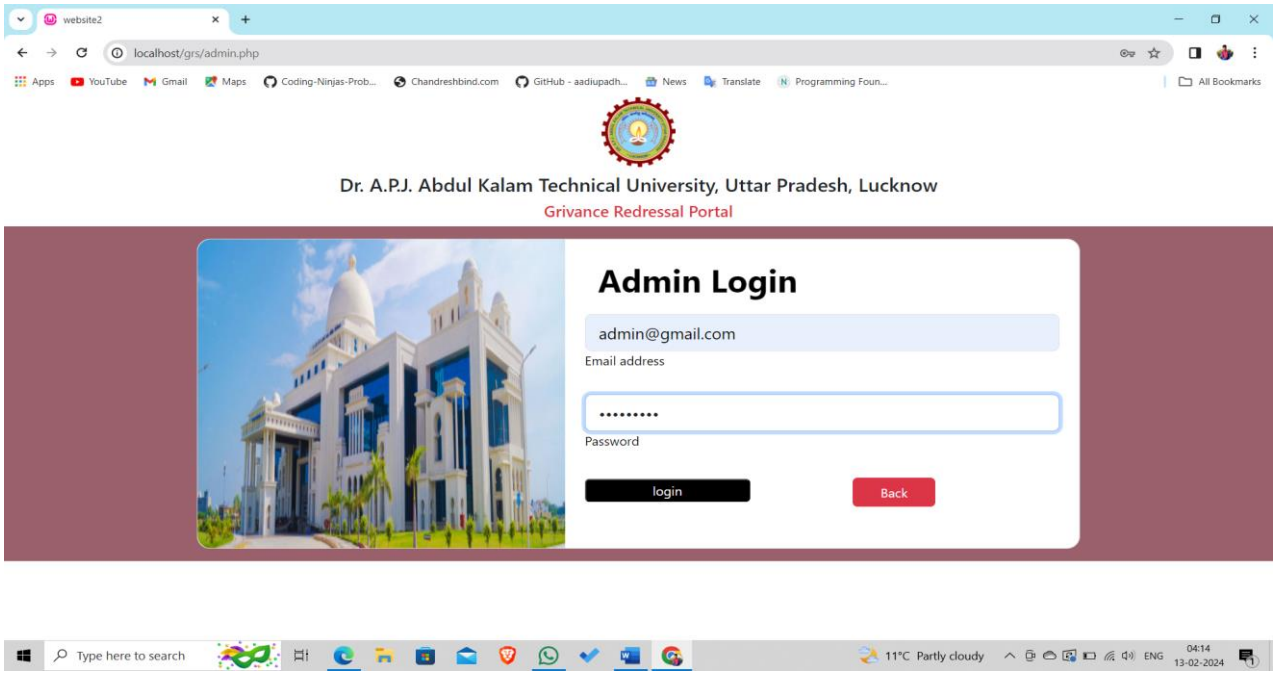
CHAPTER 9

PROJECT SNAPSHOTS

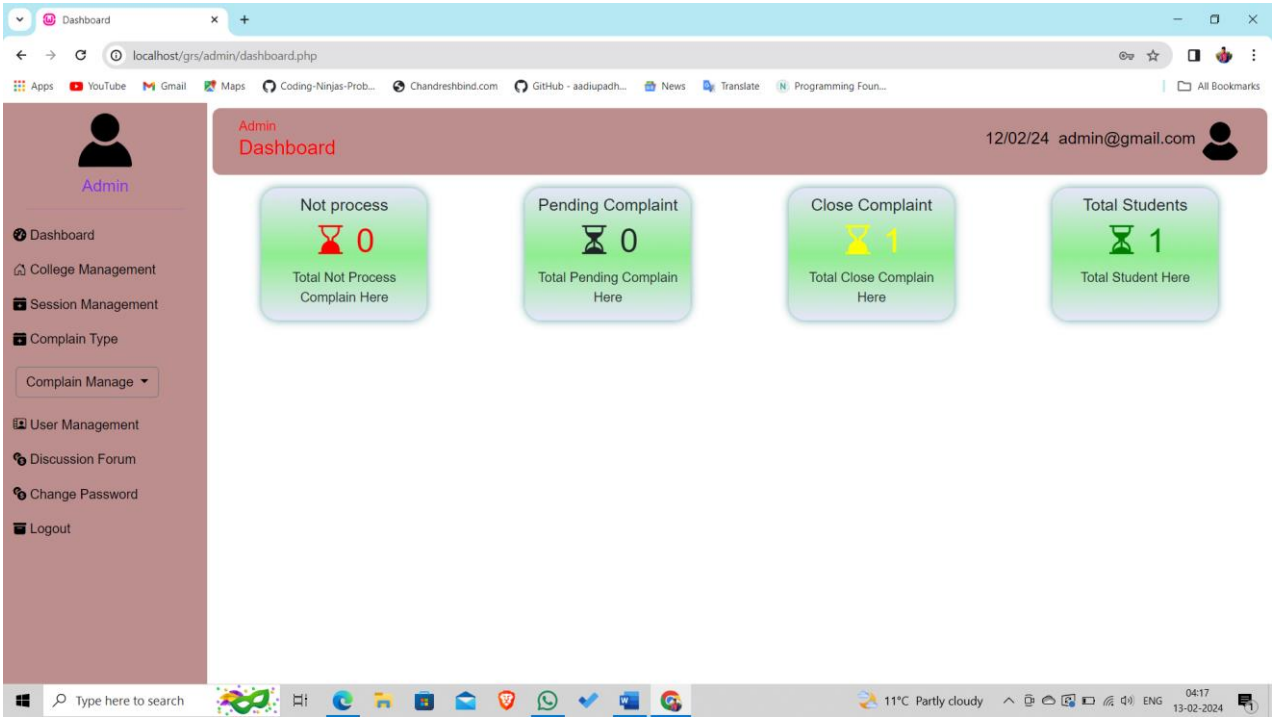
DASHBOARD



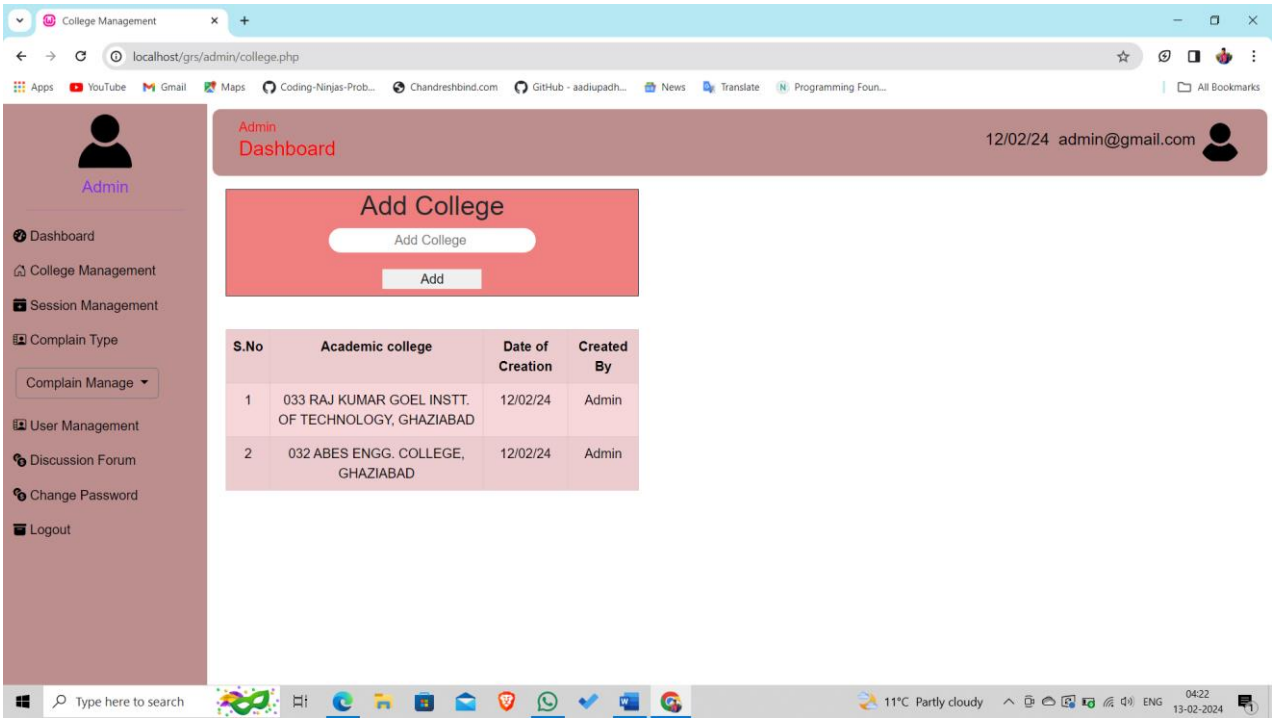
ADMIN LOGIN



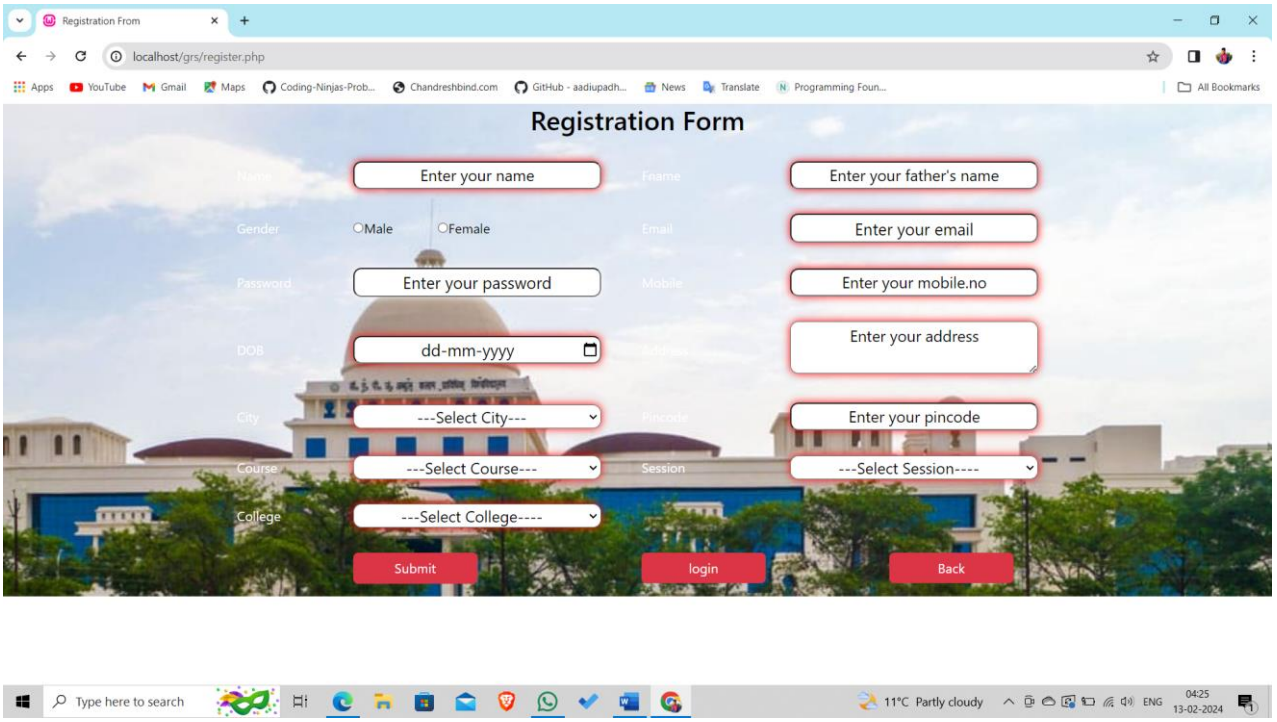
ADMIN DASHBOARD



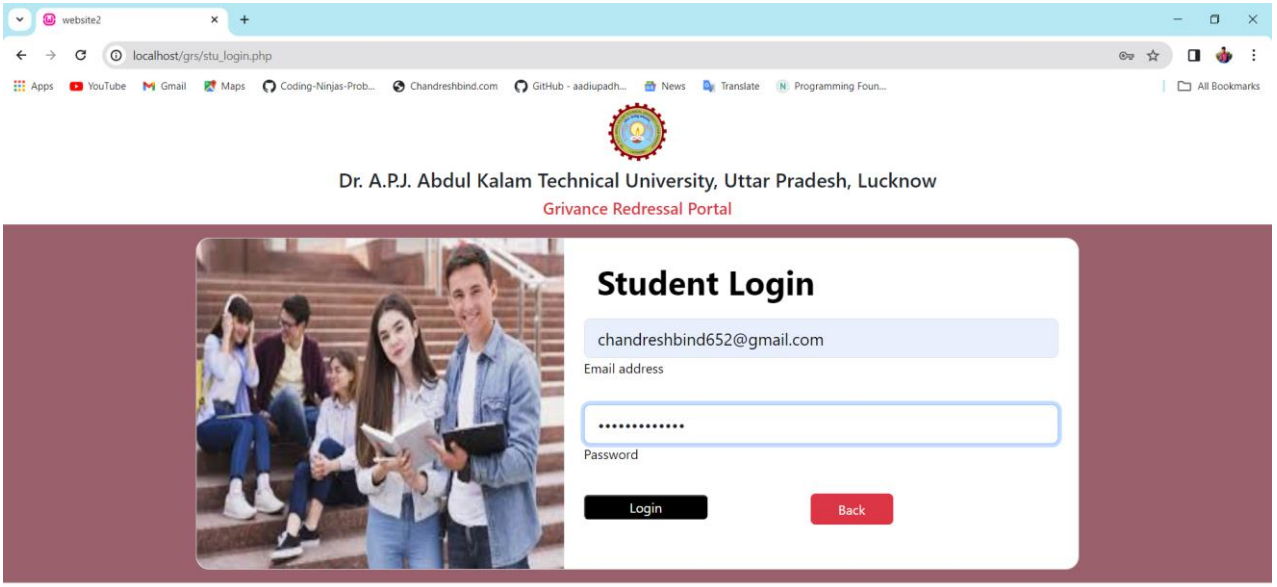
COLLEGE MANAGEMENT



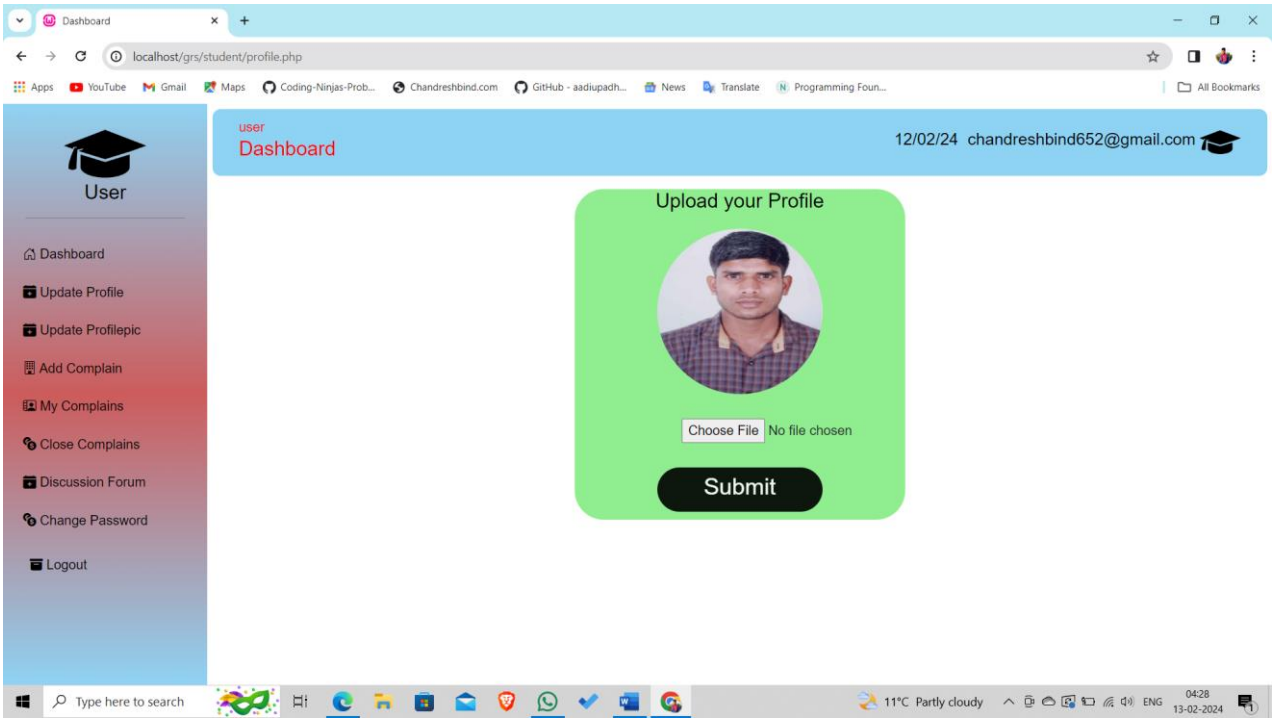
REGISTRATION



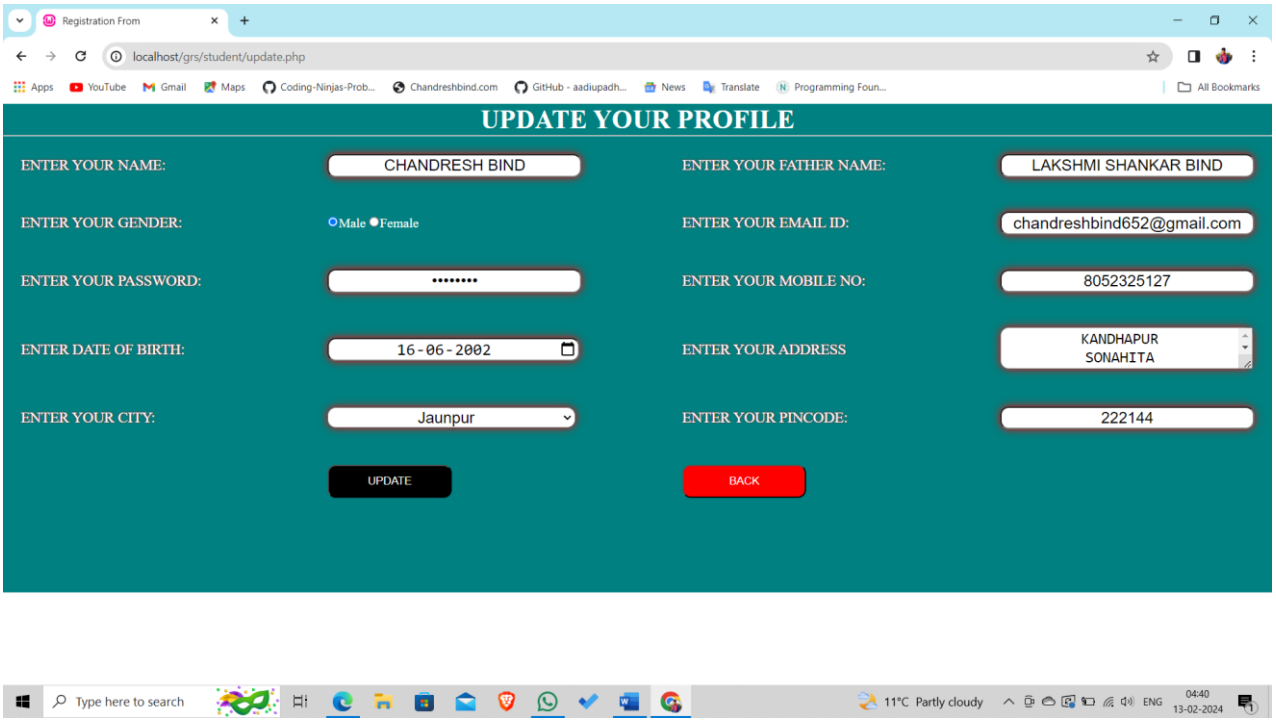
STUDENT LOGIN



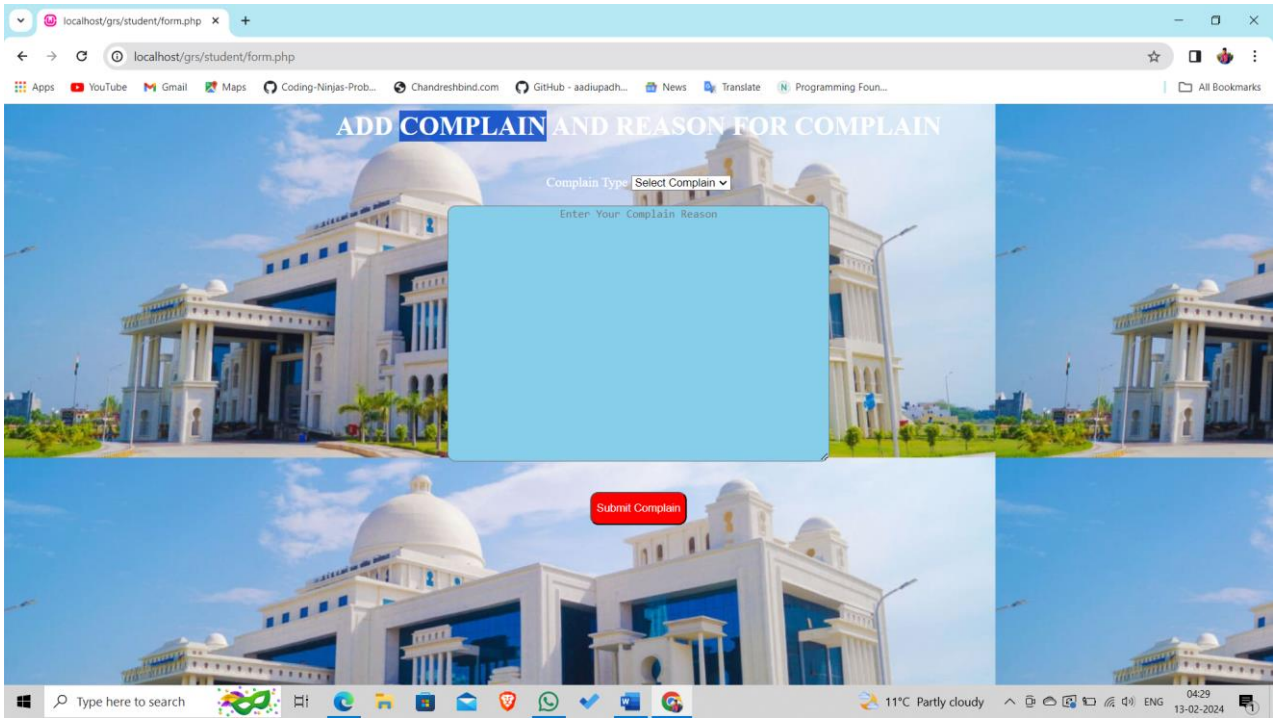
USER DASHBOARD



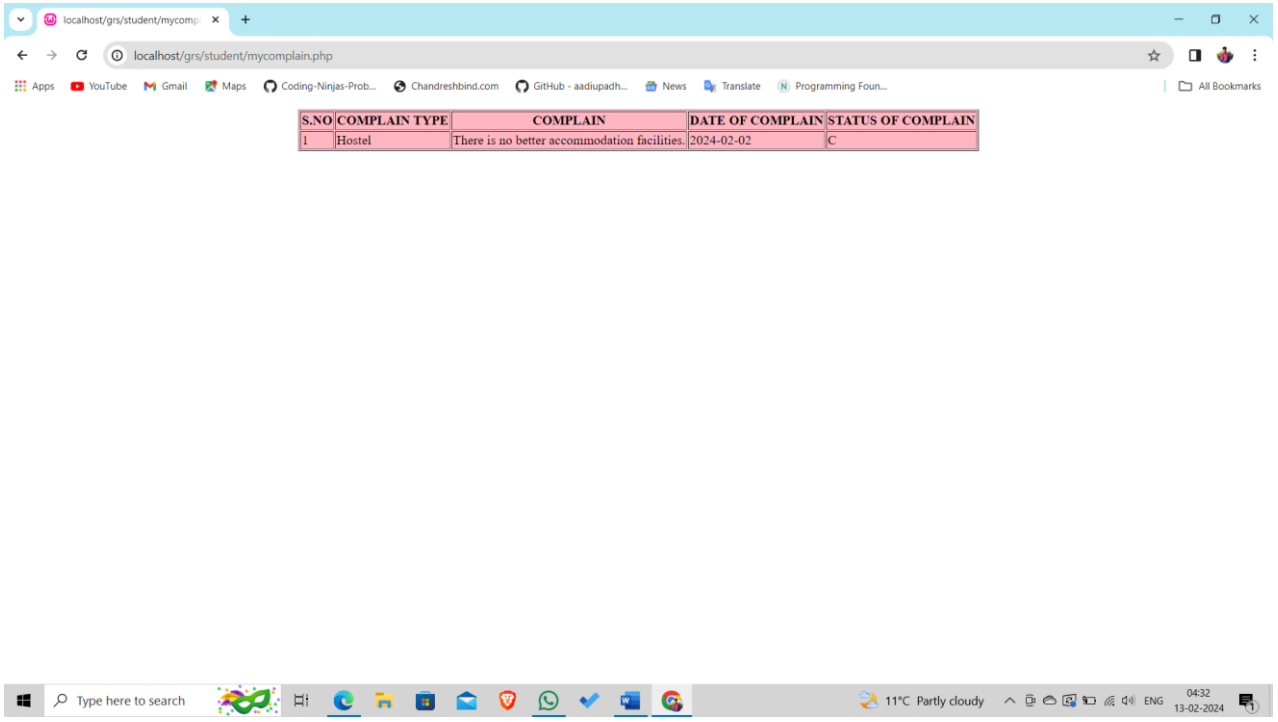
UPDATE PROFLIE



COMPLAIN SECTION

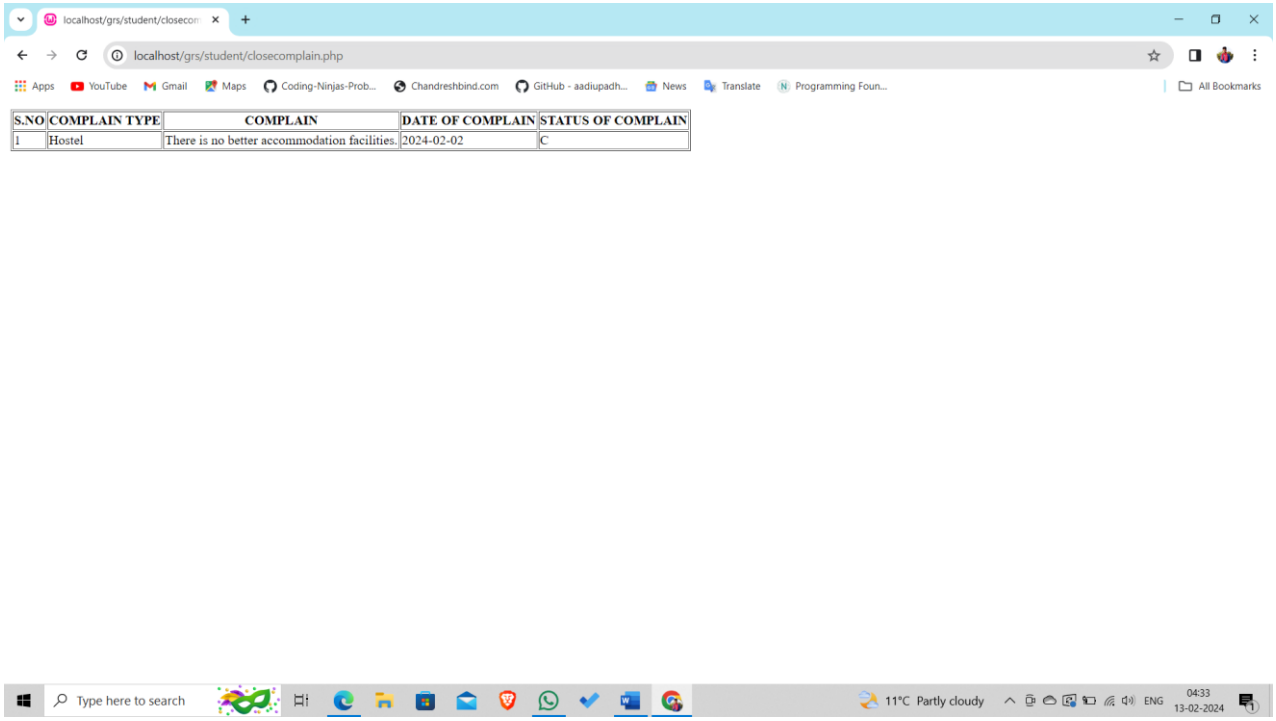


MY COMPLAINS



S.NO	COMPLAIN TYPE	COMPLAIN	DATE OF COMPLAIN	STATUS OF COMPLAIN
1	Hostel	There is no better accommodation facilities.	2024-02-02	C

CLOSED COMPLAINS



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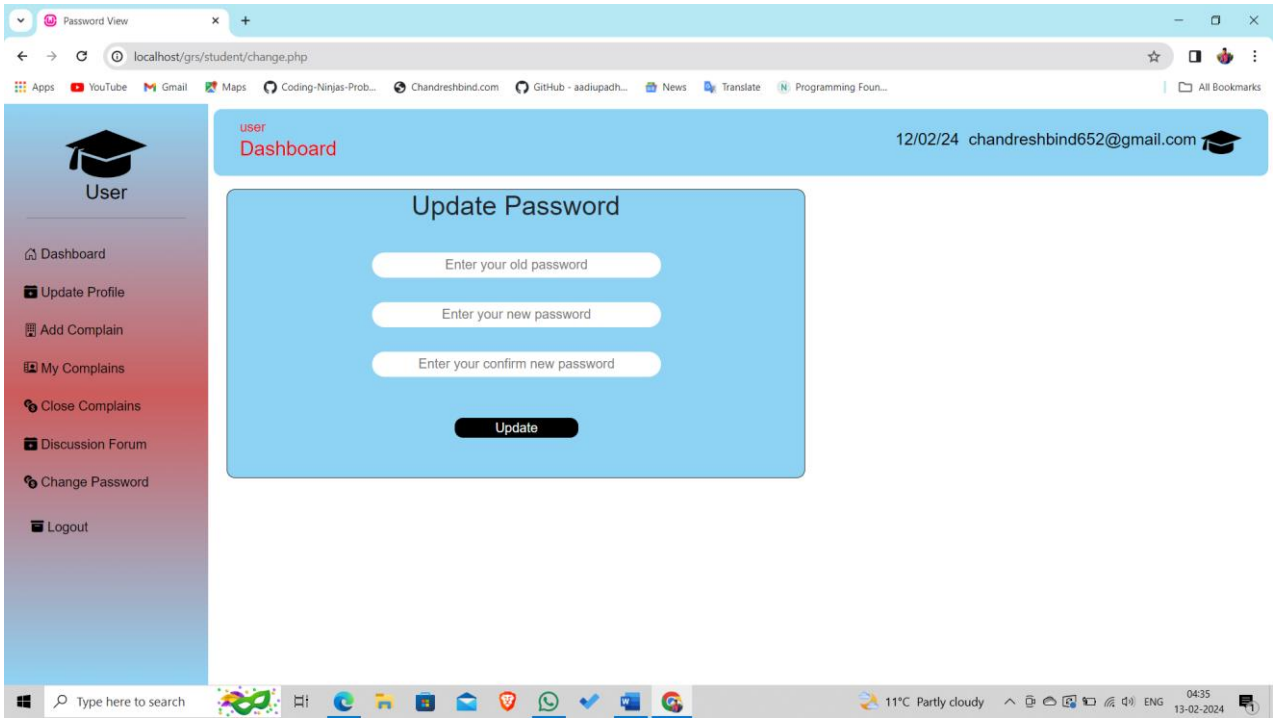
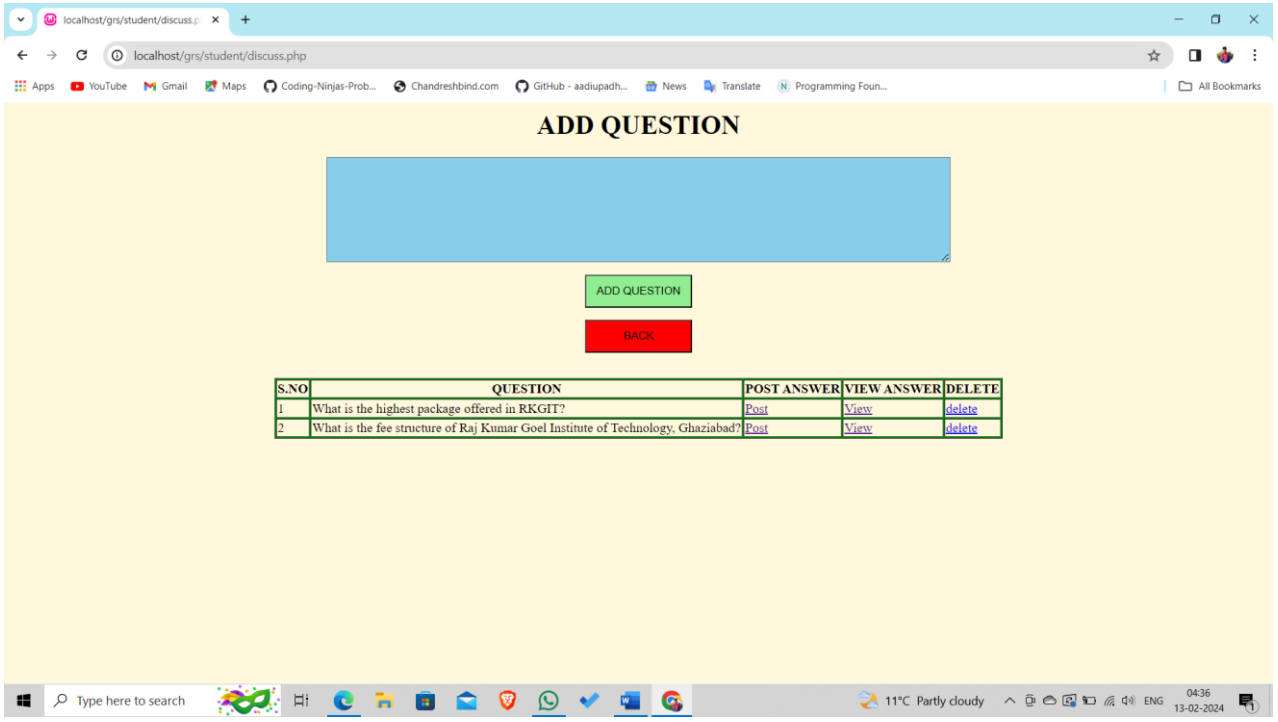
1	Hostel	There is no better accommodation facilities.	2024-02-02	C

UPDATE PASSWORD



DISCUSSION FORUM



CONCLUSION

This **Grievance Redressal System** is an attempt to highlight the fact that there are hardly such systems prevailing curtailing to the complaint redressed for students enrolled in numerous organizations. This paper has demonstrated a proposed GRS system for the grievance redressed of students covering various domains of complaints which could be lodged easily and thus leading to easy and sure solutions or redressed to the problems being faced by a student on a regular basis. The technologies used comprise of HTML and CSS to design a user-friendly graphical user interface, PHP, and SQL to keep track of the records at the back end. This system would be suitable for any organization for the resolution of complaints and thus lead to a qualitative and quantitative development of the organization.

- In future it is planned to develop our own web server to host the web application.
- Building Android Application for the system is also one of the future scope's of thisproject.

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